

table 1. While we have no 100 (F_I/F_E) data for the older age group, the lengths of time at constant end-tidal concentrations suggest that the ratios were near 100.

Part of the increased anesthetic need in children less than 6 months of age may be related to compositional differences of the brain.⁶ Although no causal relationship may exist, the decrease in anesthetic requirement with aging is associated with decreased cell density in the central nervous system, decreased cerebral oxygen consumption, and decreased cerebral blood flow.⁷

Clinically, these data imply that there is not a standard dose of halothane applicable to all ages. A dose adequate for a 40-year-old patient may be too low for the newborn and too high for the octogenarian.

The halothane for this study was supplied by Ayerst Laboratories.

References

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Obstetrical Anesthesia

FETAL BRADYCARDIA The relationships of fetal bradycardia to fetal and maternal blood levels of mepivacaine were examined in 15 unmedicated, healthy multiparous patients following the bilateral paracervical injection of 300 mg of 1.5 per cent mepivacaine. Mepivacaine was present in significant levels in the maternal blood by five minutes. Peak concentrations, evident by 10 to 20 minutes, varied from 4.7 to 17.2 $\mu\text{g/ml}$. Mepivacaine was detectable in significant concentrations in fetal samples obtained at 5 or 10 minutes. Peak concentrations occurred before 30 minutes and varied from 3.4 to 15 $\mu\text{g/ml}$. Fetal blood levels were consistently lower than maternal levels, and averaged 79 per cent of concentrations measured in simultaneously-drawn maternal blood. Fourteen of the 15 infants had Apgar scores of 8 or 9; the remaining infant scored 4. Fetal bradycardia was encountered in three cases. Two episodes of bradycardia were associated with Apgar scores of 8. In the third, bradycardia persisted and was associated with an Apgar score of 4. The only significant pH variation was in the infant with persistent bradycardia. The fetal bradycardia frequently encountered with this type of anesthesia appears to be related to concentrations in the fetal blood of 12.8 to 15 $\mu\text{g/ml}$. Although such levels might result in fetal depression, they do not appear high enough to cause death of a healthy fetus. These data stress the importance of distinguishing fetal bradycardia induced by drug toxicity from that resulting from asphyxia, and suggest that paracervical block is contraindicated when placental insufficiency is anticipated. (Gordon, H. R.: *Fetal Bradycardia After Paracervical Block: Correlation with Fetal and Maternal Blood Levels of Local Anesthesia (Mepivacaine)*, *N. Eng. J. Med.* 279: 910 (Oct.) 1968.)